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10/770,737

02/03/2004

Guan-Shian Chen

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EXAMINER

LAMB, BRENDA A

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/770,737  
Filing Date: February 03, 2004  
Appellant(s): CHEN ET AL.

**MAILED**  
**JUN 18 2007**  
**GROUP 1700**

Attorney Keith Tackett  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 2/05/2007 appealing from the Office action mailed 7/14/2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

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The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

The copy of the appealed claims contained in the Appendix to the brief is correct.

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HONGO ET AL

7-2005

2003/0045098

VERHAVERBEKE ETAL

3-2003

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 21 and 23-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Hongo et al 6,921,466.

Hongo et al teaches the design of an electroless processing system, comprising: a factory interface having a substrate transfer robot or first robot positioned therein, the factory interface being configured to communicate with at least one substrate containing cassette; and at least two substrate processing modules are interchangeable within the system and thereby is in detachable communication with and removable from the factory interface, each of the at least two substrate processing modules including a pretreatment/post treatment cell and an electroless processing cell as shown in Figure 36 or Figure 45 (see paragraphs 0038-0039, 0312 and 0336). Hongo et al teaches every element of the claimed apparatus as set forth in claim 21. With respect to claim 24, Hongo et al teaches configured to conduct at least one of rinsing or cleaning via a cleaning unit which includes a spin/rinsing/drying unit. With respect to claims 25-28, Hongo et al teaches each of the units in the semiconductor substrate processing system are interchangeable within the system. With respect to claim 23, Hongo et al teaches the at least two substrate processing modules further comprises a second substrate transfer robot or third robot positioned therein, the second substrate transfer robot or third robot being configured to transfer substrates between the substrate transfer robot or first robot in the factory interface, the pretreatment/post treatment cell, and the electroless processing cell (see Figure 43, note Hongo et al teaches that plating may be formed by electroless plating in the embodiment depicted in Figure 43).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hongo et al 6,921,466 in view of Verhaverbeke et al 2003/0045098.

Hongo et al is applied for reasons noted but fails to teach a substrate transfer robot comprised a linear track-type robot configured to access each substrate processing modules. However, it would have been obvious to modify Hongo et al apparatus by substituting its substrate transfer robot with a linear track-type robot configured to access each of substrate processing modules such as taught by Verhaverbeke et al in Figure 18A-18B for obvious advantage of simplification in design.

#### **(10) Response to Argument**

Appellant's argument that Hongo et al fails to teach a detachable unit includes two cells, that is, a pretreatment/post treatment cell and an electroless processing cell is found to be to be non-persuasive. The claims do not require that the detachable module include two separate cells rather is open to a single cell which is capable of providing electroless plating and pretreatment/post treatment of the substrate such as cleaning of the substrate presented therein (see Figure 36 of Hongo et al). In any event, Hongo et al shows in Figure 31 that a module which includes a variety of interchangeable chemical processing cells or units arranged on either side of the factory interface and a number of these cells or units within each of the modules are capable of pretreatment/post treatment of the substrate such as cleaning the substrate and a number of cells or units within each of the modules are capable of electroless plating of the substrate. For example, the cell or unit 112 within the module arranged on one side of the factory interface is capable of electroless plating of the substrate via shower head

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341 and another cell or unit 111 within the same module is capable of performing a cleaning step via nozzle 353 (Hongo et al teaches at column 37 lines 23-29 the chemical processing assembly may used in cell or unit 112 and 111).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Brenda Adele Lamb

Conferees:

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